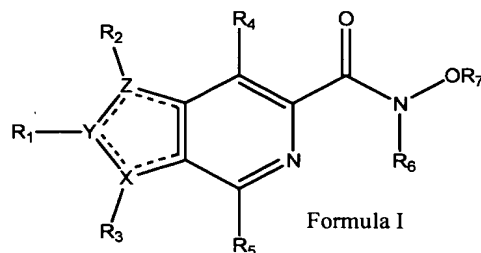


WHAT IS CLAIMED IS:

1. A compound represented by Formula I:



wherein:

R₁, R₂ and R₃ are each independently:

hydrogen; -C(O)OR_c; or an alkyl, alkenyl, heteroalkyl, or haloalkyl group, unsubstituted or substituted with one or more substituents independently selected from the group consisting of:

halogens; -O-; -OR_c; NR_cR_c; C(O)NR_cR_c; NR_cC(O)NR_cR_c;

NR_cC(O)R_c; NR_cC(NR_c)NR_cR_c; SR_c; S(O)R_c; S(O)₂R_c; S(O)₂NR_cR_c;

and alkyl, aryl, cycloalkyl, heteroaryl, and alkoxy-heteroaryl groups, unsubstituted or substituted by one or more substituents

independently selected from the group consisting of:

halogens; -C(R_c)₃; -OH; and alkyl, alkenyl, aryl and heteroaryl groups, unsubstituted or substituted with one or more independently selected R_c groups,

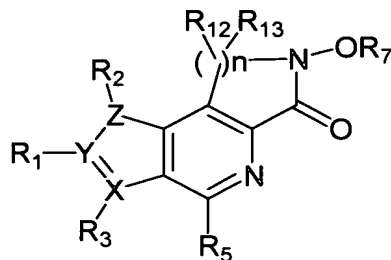
where R_c is one or more substituents independently selected from the group consisting of: halogens; hydrogen; OH; unsubstituted alkyl; unsubstituted alkenyl; unsubstituted alkynyl; unsubstituted aryl; unsubstituted cycloalkyl; unsubstituted heterocycloalkyl; unsubstituted heteroaryl; aryl and heteroaryl groups substituted with one or more substituents independently selected from the group consisting of halogen and alkyl; or two or more R_c groups together cyclize to form part of a heteroaryl or heterocycloalkyl group unsubstituted or substituted with an unsubstituted alkyl group;

R₄ is hydrogen or an alkyl, alkenyl, alkynyl, heteroalkyl, or haloalkyl group, unsubstituted or substituted with -OR_d where R_d is an unsubstituted alkyl group;

R₅ is hydrogen or an alkyl, alkenyl, alkynyl, heteroalkyl, or haloalkyl group;

R₆ is hydrogen or an alkyl, alkenyl, alkynyl, heteroalkyl, or haloalkyl group, unsubstituted or substituted with an aryl group;

R₄ and R₆ together with the N to which R₆ is attached cyclize to form the following compound represented by the Formula Id:



Formula Id

wherein R_{12} and R_{13} are each independently:

hydrogen; $-C(O)OR_c$; or an alkyl, alkenyl, heteroalkyl, or haloalkyl group, unsubstituted or substituted with one or more substituents independently selected from the group consisting of:

halogens; $-O-$; $-OR_c$; NR_cR_c ; $C(O)NR_cR_c$; $NR_cC(O)NR_cR_c$;

$NR_cC(O)R_c$; $NR_cC(NR_c)NR_cR_c$; SR_c ; $S(O)R_c$; $S(O)_2R_c$;

$S(O)_2NR_cR_c$; and alkyl, aryl, cycloalkyl, heteroaryl, and alkoxy-heteroaryl groups, unsubstituted or substituted by one or more substituents independently selected from the group consisting of:

halogens; $-C(R_c)_3$; $-OH$; and alkyl, alkenyl, aryl and heteroaryl groups, unsubstituted or substituted with one or more independently selected R_c groups,

where R_c is one or more substituents independently selected from the group consisting of: halogens; hydrogen; unsubstituted alkyl; unsubstituted alkenyl; unsubstituted alkynyl; unsubstituted aryl; unsubstituted cycloalkyl; unsubstituted heterocycloalkyl; unsubstituted heteroaryl; aryl and heteroaryl groups substituted with one or more substituents independently selected from the group consisting of halogen and alkyl; or two or more R_c groups together cyclize to form part of a heteroaryl or heterocycloalkyl group unsubstituted or substituted with an unsubstituted alkyl group; and

n is 1, 2 or 3;

R_7 is hydrogen or an alkyl, alkenyl, alkynyl, heteroalkyl, haloalkyl, aryl, cycloalkyl, heterocycloalkyl or heteroaryl group, unsubstituted or substituted with one or more substituents independently selected from the group consisting of:

halogens; and aryl, cycloalkyl, heterocycloalkyl, and heteroaryl groups, unsubstituted or substituted with one or more halogen groups;

X is C or N;

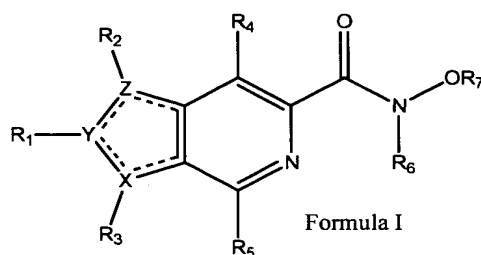
Y is C or N;

Z is C or N; and

there is a double bond between X and the 6-membered ring and Z and the 6-membered ring; or between X and Y; or between Y and Z;

or a pharmaceutically acceptable salt, pharmaceutically acceptable prodrug, or a pharmaceutically active metabolite thereof.

2. A compound represented by Formula I:



wherein:

R₁ is hydrogen or -C(O)OR_c, where R_c is an unsubstituted alkyl, unsubstituted alkenyl, or unsubstituted alkynyl group;

R₂ is hydrogen or an alkyl, alkenyl, or heteroalkyl group, unsubstituted or substituted with one or more substituents independently selected from the group consisting of :

-O-; -NR_dR_d; -OR_d; halogens; and an aryl group, unsubstituted or substituted with one or more substituents independently selected from the group

consisting of:

halogens; -C(R_d)₃; unsubstituted alkyl, alkyl-R_d, alkenyl-R_d, and aryl groups,

where R_d is one or more substituents independently selected from the group consisting of hydrogen; unsubstituted alkyl, unsubstituted alkenyl, and unsubstituted aryl groups;

R₃ is hydrogen or an alkyl, alkenyl, or heteroalkyl group, unsubstituted or substituted with one or more substituents independently selected from the group consisting of :

-O-; -OR_e; and, alkyl, aryl, cycloalkyl, and heteroaryl groups, unsubstituted or substituted with one or more substituents independently selected from the group consisting of:

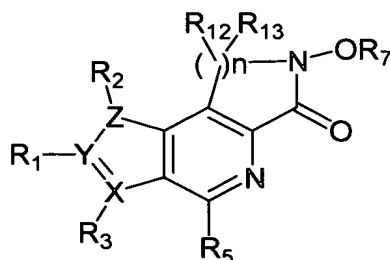
halogens; -OH; and aryl or heteroaryl groups, substituted with one or more R_e substituents,

where R_e is one or more substituents independently selected from the group consisting of halogens; hydrogen; OH; unsubstituted alkyl; and aryl unsubstituted or substituted with one or more substituents independently selected from the group consisting of halogen and alkyl;

R₄ is hydrogen or an alkyl group, unsubstituted or substituted with -OR_f, where R_f is an unsubstituted alkyl group;

R₅ is hydrogen or an alkyl group;

R_6 is hydrogen or an alkyl group unsubstituted or substituted with an aryl group;
 R_4 and R_6 together with the N to which R_6 is attached cyclize to form the following compound represented by the Formula Id:



Formula Id

wherein R_{12} and R_{13} are each independently hydrogen; and
 n is 1;

R_7 is hydrogen or an alkyl, alkenyl, or aryl group, unsubstituted or substituted with an aryl group, unsubstituted or substituted with one or more halogens;

X is C or N;

Y is C;

Z is C or N; and

there is a double bond between X and the 6-membered ring and Z and the 6-membered ring; or between X and Y; or between Y and Z;
 or a pharmaceutically acceptable salt, pharmaceutically acceptable prodrug, or a pharmaceutically active metabolite thereof.

3. A compound according to claim 2, wherein:

R_1 is hydrogen or -C(O)O-ethyl;

R_2 is hydrogen, methyl, ethyl, propyl, vinyl, allyl, or benzyl, unsubstituted or substituted with one or more substituents independently selected from the group consisting of:

halogens, -O-, OH, amino, and phenyl, unsubstituted or substituted with one or more substituents selected from the group consisting of:

methyl, ethyl, phenyl, benzyl, 2-phenylethyl, 3-phenylallyl, and 2-phenylvinyl;

R_3 is methyl, ethyl, butyl, or benzyl, unsubstituted or substituted with one or more substituents independently selected from the group consisting of:

halogens, OH, methyl, cyclohexyl, -O-, thiadiazole, thiophenyl, and phenoxy, unsubstituted or substituted with one or more substituents independently selected from the group consisting of:

halogens, phenyl, and ethoxy;

R₄ is hydrogen, methyl or methoxymethyl;

R₅ is hydrogen or methyl;

R₆ is hydrogen, methyl, or benzyl;

R₇ is hydrogen, methyl, benzyl, phenyl, allyl, or *tert*-butyl, unsubstituted or substituted
 5 with one or more halogens; and

R₄ and R₆ together with the N to which R₆ attaches cyclize to form a pyrrole-2-one.

4. A compound according to claim 3, wherein:

R₁ is hydrogen or -C(O)O-ethyl;

R₂ is selected from

10 hydrogen;
 hydroxymethyl;
 methoxymethyl;
 ethoxymethyl;
 2-phenylvinyl;
 15 3-phenylprop-1-enyl;
 [(2-phenylvinyl)oxy]methyl;
 dimethylaminomethyl;
 benzyloxymethyl;
 4-fluorobenzyl;
 20 2-phenylvinyl;
 2-phenylethyl;
 3-phenylpropyl;
 2-phenylethoxymethyl;
 [(phenylprop-2-enyl)oxy]methyl;
 25 [(3-phenylallyl)oxy]methyl;
 methyl;
 ethyl; and
 allyl;

R₃ is selected from

30 hydrogen;
 2,4-difluorobenzyl;
 2,3-difluorobenzyl;
 4-fluorobenzyl;
 3-chloro-2,6-difluorobenzyl;
 35 3-chloro-5-fluoro-2-hydroxybenzyl;
 5-chloro-thiophen-2-ylmethyl;
 3-chloro-2-fluorobenzyl;

2,3-dichlorobenzyl;
 5-ethoxy-[1,2,3]thiadiazol-4-ylmethyl;
 3-methyl-butyl;
 2-cyclohexyl-ethyl;
 2,4-difluoro-phenoxyethyl;
 3,5-difluoro-2-hydroxybenzyl;
 2-chloro-4-fluoro-phenoxyethyl;
 3-chloro-5-fluoro-2-hydroxybenzyl;
 4-fluoro-phenoxyethyl;
 5-fluoro-2-hydroxy-benzyl;
 2,3,4-trifluoro-phenoxyethyl;
 3,4,5-trifluoro-2-hydroxybenzyl;
 2-chloro-phenoxyethyl; and
 5-chloro-2-hydroxy-benzyl;

R₄ is hydrogen, methyl or methoxymethyl;

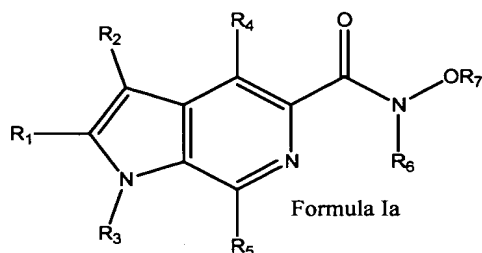
R₅ is hydrogen or methyl;

R₆ is hydrogen, methyl, or benzyl;

R₇ is hydrogen, methyl, benzyl, phenyl, pentafluorobenzyl, allyl, *tert*-butyl;

R₄ and R₆ together with the N to which R₆ attaches cyclize to form a pyrrol-2-one.

5. A compound according to any one of claims 1-4, represented by Formula Ia:



wherein:

X is N;

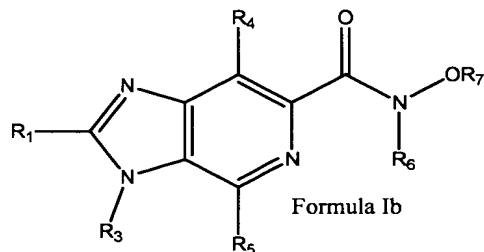
Y is C;

Z is C; and

the double bond is between Y and Z;

or a pharmaceutically acceptable salt, pharmaceutically acceptable prodrug, or a pharmaceutically active metabolite thereof.

6. A compound according to any one of claims 1-4, represented by Formula Ib:



wherein:

X is N;

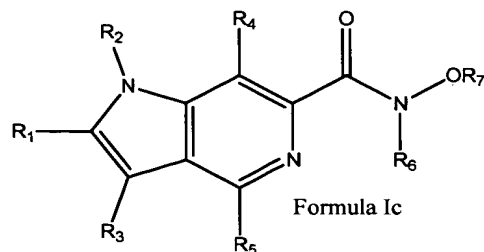
Y is C;

5 Z is N; and

the double bond is between Y and Z;

or a pharmaceutically acceptable salt, pharmaceutically acceptable prodrug, or a pharmaceutically active metabolite thereof.

7. A compound according to any one of claims 1-4, represented by Formula Ic:



10

wherein:

X is C;

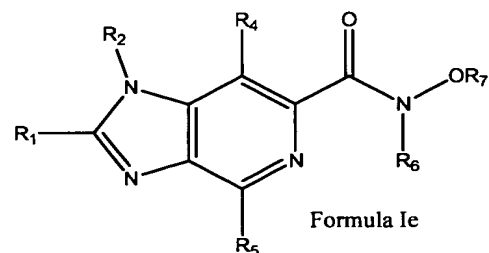
Y is C;

Z is N; and

15 the double bond is between X and Y;

or a pharmaceutically acceptable salt, pharmaceutically acceptable prodrug, or a pharmaceutically active metabolite thereof.

8. A compound according to any one of claims 1-4, represented by Formula Ie:



20

wherein:

X is N;

Y is C;

Z is N; and

the double bond is between X and Y;

or a pharmaceutically acceptable salt, pharmaceutically acceptable prodrug, or a
 5 pharmaceutically active metabolite thereof.

9. A compound or a pharmaceutically acceptable salt according to any one of
 claims 1-8.

10. A compound selected from the group consisting of:

- 1-(2,4-Difluorobenzyl)-*N*-hydroxy-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
- 10 1-(2,4-Difluorobenzyl)-*N*-hydroxy-*N*-methyl-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
- 1-(4-Fluorobenzyl)-*N*-hydroxy-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
- 1-(4-Fluorobenzyl)-*N*-hydroxy-*N*-methyl-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
- N*-Benzyl-1-(4-fluorobenzyl)-*N*-hydroxy-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
- 1-(3-Chloro-2,6-difluorobenzyl)-*N*-hydroxy-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
- 15 1-(5-Chloro-thiophen-2-ylmethyl)-*N*-hydroxy-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
- 1-(3-Chloro-2-fluorobenzyl)-*N*-hydroxy-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
- 1-(2,3-Dichlorobenzyl)-*N*-hydroxy-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
- 1-(5-Ethoxy-[1,2,3]thiadiazol-4-ylmethyl)-*N*-hydroxy-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
- 1-(2,4-Difluorobenzyl)-*N*-hydroxy-4-methyl-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
- 20 1-(2,4-Difluorobenzyl)-3-ethoxymethyl-*N*-hydroxy-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
- 1-(2,4-Difluorobenzyl)-*N*-hydroxy-3-hydroxymethyl-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
- 1-(2,4-Difluorobenzyl)-3-dimethylaminomethyl-*N*-hydroxy-1*H*-pyrrolo[2,3-*c*]pyridine-5-
 carboxamide;
- 3-Benzyloxymethyl-1-(2,4-difluorobenzyl)-*N*-hydroxy-1*H*-pyrrolo[2,3-*c*]pyridine-5-
 25 carboxamide;
- 3-(2,4-Difluorobenzyl)-*N*-hydroxy-3*H*-imidazo[4,5-*c*]pyridine-6-carboxamide;
- 1-(2,4-Difluorobenzyl)-*N*-hydroxy-1*H*-imidazo[4,5-*c*]pyridine-6-carboxamide;
- 1-(2,4-Difluorobenzyl)-3-ethoxymethyl-*N*-hydroxy-*N*-methyl-1*H*-pyrrolo[2,3-*c*]pyridine-5-
 carboxamide;
- 30 1-(2,4-Difluorobenzyl)-*N*-hydroxy-3-hydroxymethyl-*N*-methyl-1*H*-pyrrolo[2,3-*c*]pyridine-5-
 carboxamide;
- 1-(2,4-Difluorobenzyl)-3-dimethylaminomethyl-*N*-hydroxy-*N*-methyl-1*H*-pyrrolo[2,3-*c*]pyridine-
 5-carboxamide;
- 1-(2,4-Difluorobenzyl)-*N*-methoxy-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
- 35 1-(2,4-Difluorobenzyl)-3-ethoxymethyl-*N*-methoxy-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
- 1-(2,4-Difluorobenzyl)-3-hydroxymethyl-*N*-methoxy-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;

- 1-(2,4-Difluorobenzyl)-3-dimethylaminomethyl-*N*-methoxy-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
N-Benzyloxy-1-(2,4-difluorobenzyl)-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
N-Benzyloxy-3-(4-fluorobenzyl)-3*H*-imidazo[4,5-*c*]pyridine-6-carboxamide;
5 3-(4-Fluorobenzyl)-*N*-methoxy-3*H*-imidazo[4,5-*c*]pyridine-6-carboxamide;
3-(4-Fluorobenzyl)-*N*-phenoxy-3*H*-imidazo[4,5-*c*]pyridine-6-carboxamide;
3-(4-Fluorobenzyl)-*N*-[(pentafluorobenzyl)oxy]-3*H*-imidazo[4,5-*c*]pyridine-6-carboxamide;
N-(Allyloxy)-3-(4-fluorobenzyl)-3*H*-imidazo[4,5-*c*]pyridine-6-carboxamide;
6-(2,4-Difluorobenzyl)-2-hydroxy-1,6-dihydrodipyrrolo[3,2-*d*:3',4'-*b*]pyridin-3(2*H*)-one;
10 3-(2,3-Difluorobenzyl)-*N*-phenoxy-3*H*-imidazo[4,5-*c*]pyridine-6-carboxamide;
3-(2,3-Difluorobenzyl)-*N*-methoxy-3*H*-imidazo[4,5-*c*]pyridine-6-carboxamide;
N-Allyloxy-3-(2,3-difluorobenzyl)-3*H*-imidazo[4,5-*c*]pyridine-6-carboxamide;
1-(4-Fluorobenzyl)-*N*-phenoxy-1*H*-imidazo[4,5-*c*]pyridine-6-carboxamide;
N-*tert*-Butoxy-3-(2,3-difluorobenzyl)-3*H*-imidazo[4,5-*c*]pyridine-6-carboxamide;
15 *N*-Methoxy-3-(3-methyl-butyl)-3*H*-imidazo[4,5-*c*]pyridine-6-carboxamide;
3-(3-Methyl-butyl)-*N*-phenoxy-3*H*-imidazo[4,5-*c*]pyridine-6-carboxamide;
3-(2-Cyclohexyl-ethyl)-*N*-phenoxy-3*H*-imidazo[4,5-*c*]pyridine-6-carboxamide;
3-(2-Cyclohexyl-ethyl)-*N*-methoxy-3*H*-imidazo[4,5-*c*]pyridine-6-carboxamide;
N-Allyloxy-3-(2-cyclohexyl-ethyl)-3*H*-imidazo[4,5-*c*]pyridine-6-carboxamide;
20 1-(2,4-Difluorobenzyl)-*N*-hydroxy-4-methoxymethyl-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
1-(2,4-Difluorobenzyl)-*N*-hydroxy-3-(2-phenylvinyl)-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
1-(2,4-Difluorobenzyl)-*N*-hydroxy-3-(3-phenylprop-1-enyl)-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
1-(2,4-Difluorobenzyl)-*N*-hydroxy-3-(2-phenylethyl)-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
25 1-(2,4-Difluorobenzyl)-*N*-hydroxy-3-(3-phenylpropyl)-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
1-(2,4-Difluorobenzyl)-*N*-hydroxy-3-[(2-phenylethyl)oxy]methyl-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
1-(2,4-Difluorobenzyl)-*N*-hydroxy-3-[(3-phenylallyl)oxy]methyl-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
30 1-(2,4-Difluorobenzyl)-*N*-hydroxy-3-methyl-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
1-(2,4-Difluorobenzyl)-3-ethyl-*N*-hydroxy-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
3-Allyl-1-(2,4-difluorobenzyl)-*N*-hydroxy-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
1-(2,4-Difluorobenzyl)-*N*-hydroxy-7-methyl-1*H*-pyrrolo[2,3-*c*]pyridine-5-carboxamide;
Ethyl 1-(2,4-Difluorobenzyl)-5-hydroxycarbamoyl-1*H*-pyrrolo[2,3-*c*]pyridine-2-carboxylate;
35 3-(2,4-Difluoro-phenoxy)methyl-1-ethyl-*N*-hydroxy-1*H*-pyrrolo[3,2-*c*]pyridine-6-carboxamide;
3-(3,5-Difluoro-2-hydroxybenzyl)-1-ethyl-*N*-hydroxy-1*H*-pyrrolo[3,2-*c*]pyridine-6-carboxamide;

3-(2-Chloro-4-fluoro-phenoxy-methyl)-1-ethyl-*N*-hydroxy-1*H*-pyrrolo[3,2-*c*]pyridine-6-carboxamide;

3-(3-Chloro-5-fluoro-2-hydroxybenzyl)-1-ethyl-*N*-hydroxy-1*H*-pyrrolo[3,2-*c*]pyridine-6-carboxamide;

5 1-Ethyl-3-(4-fluoro-phenoxy-methyl)-*N*-hydroxy-1*H*-pyrrolo[3,2-*c*]pyridine-6-carboxamide;
1-Ethyl-3-(5-fluoro-2-hydroxybenzyl)-*N*-hydroxy-1*H*-pyrrolo[3,2-*c*]pyridine-6-carboxamide;
1-Ethyl-*N*-hydroxy-3-(2,3,4-trifluoro-2-phenoxy-methyl)-1*H*-pyrrolo[3,2-*c*]pyridine-6-carboxamide;

1-Ethyl-*N*-hydroxy-3-(3,4,5-trifluoro-2-hydroxybenzyl)-1*H*-pyrrolo[3,2-*c*]pyridine-6-carboxamide;

3-(2-Chloro-phenoxy-methyl)-1-ethyl-*N*-hydroxy-1*H*-pyrrolo[3,2-*c*]pyridine-6-carboxamide;
3-(5-Chloro-2-hydroxy-benzyl)-1-ethyl-*N*-hydroxy-1*H*-pyrrolo[3,2-*c*]pyridine-6-carboxamide
and pharmaceutically acceptable salts thereof.

11. A composition comprising:
15 a therapeutically effective amount of a compound or pharmaceutically acceptable salt according to any one of claims 1-4; and
a pharmaceutically acceptable carrier, diluent, or vehicle therefore.

12. A method of inhibiting or modulating an enzyme activity of HIV Integrase, comprising contacting said enzyme with an effective amount of a compound,
20 pharmaceutically acceptable salt, pharmaceutically acceptable prodrug, or pharmaceutically active metabolite as defined in any one of claims 1-4.

13. A method of treating a disease or condition mediated by HIV, comprising administering to a mammal in need of such treatment a therapeutically effective amount of at least one compound, pharmaceutically acceptable salt, pharmaceutically acceptable prodrug,
25 or pharmaceutically active metabolite as defined in any one of claims 1-4.

14. A method of evaluating the HIV integrase modulatory activity of a test compound, comprising:

- a) immobilizing viral DNA on a surface, wherein the viral DNA has been modified to contain a CA base pair overhang at the 5' end;
- 30 b) adding integrase to the immobilized DNA;
- c) adding a test compound to the immobilized viral DNA/integrase mixture;
- d) obtaining target ds-DNA radiolabeled at both 3' ends;
- e) combining the immobilized viral DNA/integrase/compound mixture with the radiolabeled target DNA to initiate a reaction;
- 35 f) stopping the reaction by adding a stop buffer to the combination of (e); and
- g) reading the reaction results in a scintillation counter to determine whether the test compound modulates the activity of the integrase.

15. The method of claim 14, wherein the surface is at least one scintillation proximity assay bead.